

REMARKS

The examiner has rejected the claims 1, 15 and 16 under 35 USC 101 as claiming the same invention as that of claims 1-3 and 15-16 of the US Patent No. 7,382,217. However, Applicant respectfully submits that there is no overlap between any claim of the present application and the claims of the Morita '217 patent for the reasons given below.

In the claim 1 of the Morita '217 patent, a limitation for the line occupancy rate,  $mr$ , of  $0.53 \leq mr \leq 0.65$  is claimed; and the Morita '217 patent states that with this limitation, the capacitance ratio  $\gamma$  decreases.

In addition, in the claim 2 of Morita '217 patent, a limitation of  $0.55 \leq mr \leq 0.68$  is claimed; and with this limitation, the frequency variation that is caused by differences in the line occupancy rate  $mr$  is suppressed, and thus it is possible to obtain excellent frequency control performance.

Furthermore, in claim 3 of Morita '217 patent, a limitation of  $0.55 \leq mr \leq 0.65$  is claimed; and with this limitation, it is possible in this patent to provide a SAW device that has both the optimal capacitance ratio  $\gamma$  and excellent frequency control performance.

The claims 5, 15, and 16 of the Morita '217 patent respectively depend on the claims 1, 2 and 3; and therefore, these claims have the limitations for the line occupancy rates  $mr$  described above.

In other words, Applicant respectfully submits that the claims 1-3, 5 and 15-16 of the Morita '217 patent require the limitation of the line occupancy rate  $mr$  itself.

To the contrary, in any of the claims 1, 15 and 16 of the present invention, there is no lower or upper limitation of the line occupancy rate  $mr$  itself. Furthermore, Applicant respectfully submits that there is no description in the claims 1, 15 or 16 of the present application of the optimal capacitance ratio  $\gamma$  brought by the line occupancy rate  $mr$  itself or of the excellent frequency control performance. Accordingly, Applicant respectfully submits that the invention of the claims 1 and 15-16 of the present application is not the same as that of the claims 1-3, 5 and 15-16 of the Morita '217 patent.

Still further, Applicant respectfully submits the claims of Morita '217 does claim grating reflectors on both sides of the IDT.

The examiner further has pointed out that the claim 4 of the present application claims the same invention as that of claim 5 of the Morita '217 patent. However, Applicant respectfully submits that the claim 4 of the present invention does not claim the limitation of the line occupancy ratio  $mr$  itself that is claimed in the claim 5 of the Morita '217 patent; and thus, Applicant respectfully submits that the invention of the claim 4 of the present application is not the same as that of the claim 5 of the Morita '217 patent.

In view of the above, Applicant respectfully submits that the claims 1, 4, 15 and 16 are not rejectable under 35 USC 101 as being the same as claims 1-3, 5, 15 and 16 of Morita '217.

The examiner has rejected the claims 2, 3 and 5-14 on the grounds of non-statutory obviousness type double patenting as being unpatentable over claims 1 and 5 of Morita '217. However, Applicant respectfully submits that the invention of the claims 2, 3 and 5-14 of the present application is not obvious over the invention of the claims 1 and 5 of the Morita '217 for the reasons given below.

In the claims of 1 and 5 of the Morita '217 patent, a limitation of  $0.53 \leq mr \leq 0.65$  is claimed; and the Morita '217 patent states that with this limitation, the capacitance ratio  $\gamma$  decreases. However, Applicant respectfully submits that the claims 1 and 5 do not claim this relationship between the cut angle  $\theta$  and the electrode film thickness  $H/\lambda$  that would set the turnover temperature  $T_p$  into a practical range of  $-50^\circ\text{C} \leq T_p \leq +125^\circ\text{C}$  nor the relationship between the cut angle  $\theta$  and the product  $H/\lambda \times mr$ . In addition, the claims 1 and 5 of the Morita '217 do not disclose the relationship between the cut angle  $\theta$  and the electrode film thickness  $H/\lambda$  or between the cut angle  $\theta$  and the product  $H/\lambda \times mr$  which sets the turnover temperature  $T_p$  into a practical range of  $0^\circ\text{C} \leq T_p \leq +70^\circ\text{C}$ .

To the contrary, in the claims 2, 3 and 5-14 of the present application, inequality expressions of the cut angle  $\theta$  and the electrode film thickness  $H/\lambda$  (for example:  $-1.34082 \times 10^{-4} \times \theta^3 - 2.34969 \times 10^{-2} \times \theta^2 - 1.37506 \times \theta - 26.7895 < H/\lambda < -1.02586 \times 10^{-4} \times \theta^3 - 1.73238 \times 10^{-2} \times \theta^2 - 0.977607 \times \theta - 18.3420$  in claim 2) and of the cut angle  $\theta$  and the product of the electrode film thickness and line occupancy rate  $mr$  (for example:  $-8.04489 \times 10^{-5} \times \theta^3 - 1.40981 \times 10^{-2} \times \theta^2 - 0.825038 \times \theta - 16.0737 < H/\lambda \times mr < -6.15517 \times 10^{-5} \times \theta^3 - 1.03943 \times 10^{-2} \times \theta^2 - 0.586564 \times \theta - 11.0052$  in claim 3) are claimed; and the specification of the present application describes that with these inequality expression limitations, the turnover temperature  $T_p$  can be set to be a practical

temperature range of  $-50^{\circ}\text{C} \leq T_p \leq +125^{\circ}\text{C}$ . Still further, Applicant respectfully submits that in the claims 2, 3 and 5-14 of the present application, there is no limitation set for conditions of the line occupancy ratio  $m_r$  that reduces the capacitance ratio  $\gamma$ .

Still further and in regards to the cut angle  $\theta$ , the electrode film thickness  $H/\lambda$ , and the line occupancy ratio  $m_r$ , the claims of 1 and 5 of the Morita '217 patent define that the cut angle  $\theta$  is  $-64.0^{\circ} < \theta < -49.3^{\circ}$  and the electrode film thickness  $H/\lambda$  is  $0.04 < H/\lambda < 0.12$  (in claim 1) or  $0.05 < H/\lambda < 0.10$  (in claim 5) and the line occupancy ratio  $m_r$  is  $0.53 \leq m_r \leq 0.65$ . However, Applicant respectfully submits that with these limitations alone, a practical turnover temperature is not obtainable; and such a practical turnover temperature can be obtained only by the above inequality expression of the cut angle  $\theta$  and the electrode film thickness  $H/\lambda$  or by the above inequality expression of the cut angle  $\theta$  and the product of the electrode film thickness  $H/\lambda$  and line metallization rate  $m_r$  of the present invention.

More specifically, Applicant respectfully submits that in the claims 1 and 5 of the Morita '217 patent, there is no description of the relationship that sets the turnover temperature  $T_p$  to be within a practical temperature range in which the relationship is of between the cut angle  $\theta$  and the electrode film thickness  $H/\lambda$  or of between the cut angle  $\theta$  and the product  $H/\lambda \times m_r$ , an electrode film thickness and a line metallization rate, which are the features of the invention of the claims 2, 3 and 5-14 of the present application.

In addition, in the claims 2, 3 and 5-14 of the present application, there is no description of the conditions of the line occupancy rate  $m_r$  that decrease the capacitance ratio  $\gamma$ , which are the features of the claims 1 and 5 of the Morita '217 patent.

The above conditions for decreasing the capacitance ratio  $\gamma$  as claimed in the claims 1 and 5 of the Morita '217 patent and the above conditions for setting the turnover temperature  $T_p$  of the present invention are both not definable based on ordinary technical creativity of one skilled in the art; and further, such conditions both cannot be found easily by ordinary research done by one skilled in the art.

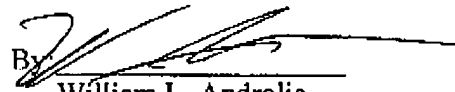
As seen from the above, Applicant respectfully submits that the claims 2, 3, and 5-14 of the present application and the claims 1 and 5 of the Morita '217 patent are entirely different in the structure, providing entirely different inventive advantages, and the claims of the present application are not obvious over those of Morita '217.

Applicant further respectfully and retroactively requests a one (1) month extension of time to respond to the Office Action and respectfully requests that the extension fee in the amount of \$130.00 be charged to QUINN EMANUEL DEPOSIT ACCOUNT NO. 50-4367.

In view of the above, it is respectfully requested that the Examiner favorably consider this response, reconsider the rejection and pass the case to issue.

Please charge any additional costs incurred by or in order to implement this Response or required by any requests for extensions of time to QUINN EMANUEL DEPOSIT ACCOUNT NO. 50-4367.

Respectfully submitted,

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